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Digital portfolio and self-regulation in speaking tasks

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Abstract

Self-regulated learning has been recognized as helpful in language learning. This study showed how self-regulated learning contributes to stimulating students' speaking skills. In an English as a Foreign Language (EFL) setting, speaking is generally perceived as a challenging task requiring actions, skills, or strategies to achieve successful communication. As the actions, skills, or strategies feature learners' planning in class, digital portfolios substantially impact language learning. This study examined the impact on Kuwaiti female students' self-regulation processes during speaking tasks in EFL classes. The main results that pervaded were the anticipation, realization, and reflection phases in speaking tasks. Results have shown that self-regulated learners can speak successfully when they understand and regulate what they do with a speaking task.

Keywords: Digital portfolio, Oral tasks, Kuwaiti EFL students

Introduction

Inspired by what an artist puts together to present his work, the portfolio's popularity in school circles grew over the years (Baki & Birgin, 2004; De Fina, 1992; Norman, 1998), and its use was defined to allow a broader range of aims for the school. Among these is the development of learners' self-regulation capacity, offered in a type of portfolio called the learning portfolio, which comprises learners' use of cognitive, metacognitive, and social strategies, thereby enabling them to perform reflection that helps them define their strengths and challenges. In this sense, metacognition and self-regulation are interrelated in the sense that they both support students to reason and reflect more clearly about their learning more frequently through the strategies of checking and evaluating their learning. Of course, this can be attained with the support of their teachers and by setting objectives so that subsequent achievements and learning can be carried out most efficiently (Barrett, 2007; Barrett & Carney, 2005; Joyes et al., 2010; Sim & Hew, 2010).

According to Zimmerman's (2000) theoretical model of self-regulation of learning, e-portfolios can be used by students at all school levels, from primary to adult education. In the field of oral didactics, several researchers have counted on the importance of metacognition in the development of oral competence (Brown, 2007; Hauck, 2005; Klam, 2007; Wenden, 1998). However, the place given to this skill in the Kuwaiti class is somewhat limited. The oral skill is approached conventionally, that is to say, without

any strategic teaching of subjects of study (Keshta & Harb, 2013). Thus, despite the tools (evaluation grids, self-assessment, etc.) and means (observation, interviews, etc.) that exist to enable meaningful oral learning (Al-Issa & Dahan, 2011), few are used regularly. A portfolio constitutes a tool with exciting potential but little didactic oral documentation to record the students' work, draw a portrait of their development, and record traces of their progress over a given period. Therefore, the portfolio is the focus of the present study (Abrami et al., 2013).

This study is concerned with competence in speaking skills and the self-regulation process by exploring the contribution of the e-portfolio. Specifically, this research aims to describe and analyze the portfolio's contribution to using self-regulation strategies during speaking activities. The study asked: what is the effect of portfolio and self-regulation strategies on 10th-grade students' speaking tasks? Before approaching the methodology of this research and the phases of the oral activities involving the use of the portfolio, it is advisable to present the theoretical basis of this study. The present study used phases of Zimmerman's (2000) model. To this end, the following is a review of self-regulation models, among which is Zimmerman's (2000).

Theoretical framework

Self-regulating learning

On reviewing theoretical issues of self-regulation, Zimmerman's influential theory of its connection to learning cycles is discussed. This concept offers valuable attention to classroom dynamics research and policy-making. Drawing on Zimmerman (2000), Pintrich (2000), Winne (2011), and Boekaerts' (2011) theories, a demonstration of key concepts are highlighted with relevance to phases and processes of self-regulation as follows.

In Zimmerman's model of self-regulated learning, learners may self-regulate various stages of their learning, comprising their motivations, goals, strategies for tasks, self-evaluation, control, and monitoring tasks. These stages are described in Zimmerman's (2000) three-phase model, which defines the relationship of self-regulation with diverse stages. A comparable model of self-regulation has been established by Pintrich (2000). Like Zimmerman's model, Pintrich highlighted the exchanges between cognition, motivation, setting, and behavior through various stages of the self-regulation process. This theory pinpoints four stages of self-regulation, utilizing four likely extents of self-regulation in each stage. Specifically, anticipation involves preparation and activation, monitoring the learning process, control, and reaction reflection. Learners who are apt to use such self-regulation strategies will be proficient ones; they are self-confident. For instance, learners who lack confidence in learning cannot employ successful strategies.

A recent model by Winne (2011) proposed four recursive stages. In the first stage, learners understand and define the given task. In the second stage, learners set their goals and plan to achieve the given task. After that, in the third stage, learners react strategically to achieve the targeted goals. The final stage occurs when learners start adapting strategies in their course of study. Of course, such metacognitive adaptation of strategies entails durable modifications in one's motivation, views, and schemes. Further, this model identifies the facets of any given task in light of conditions/resources, products/operations, evaluation/feedback, and standards/criteria. The model details the cognitive processes of planning, acting out, and monitoring a given task.

In a similar vein, three models of self-regulated learning were developed by Boekaerts (2011). The first is the Structural model, whereas the second is the Adaptable Learning Model. The former has six elements organized around both the cognitive and affective domains. These elements are as follows: subject-knowledge skills, motivational views, motivational strategies, motivational self-regulatory strategies, cognitive strategies, and self-regulatory cognitive strategies. The latter has two modes that scaffold comprehension. It is organized around learning, motivation, metacognition, feelings, and self-concept. It was extended further, modified, and labeled the Dual Processing model. It targeted intensifying learners' knowledge and skills, shielding learners' commitment to any given task, and avoiding risk to themselves.

Speaking tasks

This section starts with speaking tasks. Then, a portrait of the research on the advantages and challenges of using the learning portfolio with cognitive and metacognitive activities is presented.

Research has shown that systematic teaching of oral tasks as part of planned and integrated oral activities allows students to achieve more solid learning. Brown (2007) has proposed a didactic model of oral production. The critical element of this model is the use of the didactic sequence, which revolves around a communication project that gives meaning to the students' learning. In this sequence, the activities start with an initial oral production through which the students become aware of their knowledge and overcome their speaking challenges. Of course, this can be attained through the means of training workshops. These allow the learning of the various oral tasks that will be at the heart of the final production, which completes the sequence of activities of the communication project.

Regarding oral tasks instruction, the work of Dumais and Messier (2016) made it possible to clarify the six stages, the organization of which promotes better preparation for students with speaking skills and a better understanding of the elements that will be assessed. Each workshop begins with *the trigger* (1), where the oral teaching–learning object is present, which will be approached and defined as a unit that can be broken down into elements that constitute other teaching/learning tasks. It continues with *the student's state of knowledge* (2), making it possible to meet the strengths and challenges of this oral task. Then, *teaching* (3), explicit or modeling, aims to acquire knowledge. Exercises in a group class or subgroups offer an opportunity to put this knowledge *into practice* (4) before a *return to a large group* (5), during which the observations made in the previous step are pooled. Finally, *a metacognitive activity* (6), focused on the knowledge that the student acquires about his cognitive processes and products, allows everyone to consolidate their learning and reinvest it in the final product.

Portfolios

The portfolio for developing cognitive strategies and metacognition is defined as a collection of a student who is proof of his competence, showing relevant traces of his achievements (Mills-Courts & Amiran, 1991). Beyond this relatively simple definition, research allowed the presentation of different portfolios used in the school context. The

presentation portfolio aims to highlight the illustrious achievements of students (Danielson, 2007).

While the evaluation portfolio allows them to demonstrate that they have reached their level of competence (Gearhart & Herman, 1995), The learning portfolio goes beyond the simple presentation of a student's best work and does not aim to determine the level of proficiency achieved as the primary objective. It is, in fact, a tool whose objective is to promote the development of intuitive skills in the face of learning (Bass, 2014; Eynon & Gambino, 2017), among other things, because the process underlying it relies heavily on the learning goals pursued by the student. Based on these goals, the latter will judge his progress and reflect on the approach followed to ensure that the strategies retained and used are adequate or need to be reviewed (Abrami et al., 2013).

Since the student occupies an active and central place in the process of reflection required by the creation of a learning portfolio (Chau, & Cheng, 2010), this offers him a double advantage: it allows the student to identify their strengths and challenges better while allowing them to gain autonomy given the knowledge of their preferences related to the learning modes that they acquire during the process (Wang, 2010). Thus, using the learning portfolio seems conducive to developing a critical sense about the effectiveness and relevance of the cognitive strategies employed and, therefore, a metacognitive capacity that will be useful to him in all spheres of his life (Abrami & Barrett, 2005).

However, this way of working presents a few challenges that must be considered. Let us first note that a portfolio is a tool that requires time, given the important place occupied by reflection activities (Kuh, 2008; Van Schaik et al., 2013), and that its use requires a change in the teaching practices of teachers so that the pupil is well supported (Welsh, 2012). Support from the teacher is also seen as essential to effectively developing the student's metacognitive skills (FitzPatrick & Spiller, 2010). It is then desirable to limit the number of skills tracked by the portfolio, at the risk of losing effectiveness and discouraging students, particularly in high school (Cowan & Peacock, 2017; Farrell & Kennedy, 2019).

Self-regulation phases and speaking

In education, the socio-cognitive approach has made it possible to take a detailed look at the processes and strategies that underpin student learning from elementary school to university. Learners may self-regulate various stages of their learning, comprising their motivations, goals, strategies for tasks, self-evaluation, control, and monitoring tasks. These stages are described in Zimmerman's (2000) three-phase model, which defines the relationship of self-regulation with diverse stages. In this regard, this model allows educators to better understand how these processes and strategies are organized. Moreover, self-regulation can be defined as follows: "[…] self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals" (Zimmerman, 2000, p. 14). It is from Bandura's work that Zimmerman describes the organization of processes in what he calls the three cyclical phases of self-regulation (Table 1): the anticipation phase [forethought phase], the realization phase [performance phase], and the self-reflection phase (Zimmerman, 2000). Zimmerman's model is very inclusive by entailing the bulk of the main phases in developing speaking skills and presenting a theoretical basis that steers what features are pertinent to this study.

Table 1 Phases and processes of self-regulation

Anticipation phase	**Realization phase**	**Reflection phase**
Task analysis	**Self-control**	**Personal judgment**
Self-setting goals	*Task-related strategies*	*Self-evaluation*
Planning	*Self-instruction*	*Causal attributions*
	Imaging	
	Time-management	
	Environment management	
	Help search	
	Strategy to improve its interest	
	Personal consequences	
Motivational beliefs	**Self-observation**	**Personal reaction**
Self-efficacy	*Metacognitive monitoring*	*Self-satisfaction*
Expectations for results	*Self-registration*	*Adaptive decisions or defensive*
Intrinsic interest		
Goal orientation		

The anticipation phase occurs before the necessary efforts for learning begin, precisely and according to the table, grouping together two categories of process.First, the task is *analysis*. This leads the learner to *self-set* the learning goals he wishes to achieve as part of the task at hand. Three conditions facilitate self-regulation and allow a better quality of learning: the goal set must (1) be specific, by explicitly specifying the level of performance to be achieved regarding a learning task; (2) be proximal, that is to say, close together in time to encourage the learner who quickly notices progress; and (3) present a level of difficulty sufficient to allow the development of self-regulation. Then, to achieve the set goals, the learner carries out *strategic planning*, leading him to choose the strategies he will implement. These choices are not immutable since the student will be able to revise strategies deemed ineffective if necessary (Zimmerman, 2000).

The second category in Table 1, that of *motivational beliefs,* allows the student to fully draw the necessary motivation to invest in the task at hand. At this stage, different motivational sources are called upon. *Self-efficacy* beliefs refer to a student's perception of their ability to complete a task. *Expectations* regarding results refer to the consequences of the performance results on the task and the learning achieved. On the other hand, intrinsic interest relates to the value and interest of the task at hand, and, ultimately, *goal orientation* is the reason the student engages in the proposed task. In this regard, research shows that the student, orienting his goals towards the mastery of teaching objects rather than the learning outcome, mobilizes cognitive strategies. Once the goals have been set and the work plan established, the student implements the latter in the implementation phase, including two categories of processes.

According to Table 1, there is self-control, which includes task-related strategies. These are cognitive strategies that meet the exclusive needs of a specific task, self-instruction, instructions or directives addressed to the student to be guided in carrying out a task, imagery. Also, these include strategies allowing time management, management of the work environment, or seeking help from a teacher or colleague. Through these strategies, the student maintains the conditions that allow him to achieve the goals set at the

start. To do this, he will then make sure to use strategies to improve his interests, for example, by voluntarily attributing a competitive character to a given task and assessing the personal consequences of his successes or failures to guide his efforts.

Next comes the category of self-observation. First, metacognitive monitoring consists of monitoring the development of the student's learning to ensure that it is in line with the goals set. Along with this process, self-registration leads the student to keep records of his actions and the results obtained to identify the strategies that prove effective or not and the difficulties encountered in achieving his goals. In a way, he builds a logbook to which he can later refer to carry out better learning tasks (Abrami & Barrett, 2005; Arter & Spandel, 1992). When the task is completed, the third phase of self-regulation occurs, the reflection phase. This phase also brings together two categories of processes: The first personal judgment leads the student to perform a self-assessment of his performance to determine whether or not he is achieving the goals set during the anticipation phase.

This self-assessment leads him to determine the reasons behind his successes or failures, whether internal (such as the unwise choice of a strategy) or external (such as the lack of clarity of instruction). At this point, Zimmerman (2000) refers to the concept of causal attribution. Thus, the student who attributes his successes or failures to internal causes will tend to put in more effort and constantly invest in his learning. The second category, personal reaction, groups together self-satisfaction, involving the perception of satisfaction or dissatisfaction at the end of personal judgment, and adaptive or defensive decisions, the first comprising strategies that will be reused subsequently given their effectiveness or those that will be improved, and the second comprising the reactions that lead the student to protect themselves and avoid situations of dissatisfaction.

Zooming into self-regulated learning and its relevance to speaking tasks, the reviewed models seem to be cyclic. Therefore, Schunk and Ertmer (2000) maintained that interventions have to focus on improving both competencies in self-regulated learning in the performance phase and the self-efficacy phase, rather than focusing on these competencies in isolation. For example, learners deficient in speaking ability are doubtful about their ability to employ operative strategies. Self-regulated learning models offer an umbrella to identify variables that guide effective learning. One concluding remark after this account is that the models are helpful for treatment under certain conditions and participants. The current study is featured in Zimmerman's (2000) model as it was further considered for speaking tasks addressed through digital portfolios. To this end, limited participation is a problem faced by EFL learners when they feel that they cannot remember anything to say and thus feel demotivated towards expressing themselves. To help them develop their speaking skills, digital portfolios through self-regulated learning strategies were integrated collaboratively to enjoy speaking activities and improve speaking skills at their own pace.

Method

A mixed methodology was adopted to achieve the objective of this research, namely, to describe and analyze the contribution of the digital learning portfolio to the use of self-regulation strategies of high school students during speaking activities in Kuwaiti classes. Questionnaires were used to evaluate participants' speaking skills (at different

phases) and determine their self-regulation levels in the course. A descriptive statistical method was used to analyze the student survey. Face-to-face interviews were used as a data collection method.

Survey questionnaires alongside interviews were used in an interpretive paradigm. Therefore, this allows a preliminary understanding of what is experienced by the participants in learning.

Participants and setting

During the 2020–2021 school year, this study was carried out with 77 students (n = 77) from 4 tenth grade classes at a private education institution for girls in Kuwait. These students participated throughout the year in three Learning and Evaluation Situations (LES) integrating speaking tasks built according to the didactic sequence of Schneuwly and Bain (1994) and the didactic model of the training workshop of Dumais and Messier (2016), presented earlier in the theoretical framework. Table 2 shows the general organization of our three LES and the use of the digital learning portfolio.

At each step of the LES, the video recordings, the self-assessment grids, the form summary, and the teacher's assessment grids are placed in the portfolio of digital student learning. After each production recorded on video, the students had to make two self-assessments, the first before watching the video and the second after listening. On the one hand, these self-assessments were built according to an exact framework and allowed feedback. On the speaking skill itself, and, on the other hand, on the whole, the learning process that surrounded its achievement. A summary sheet of reflections allowing feedback on students' learning was filled in by students. These self-assessment and reflection sheets, video recordings, and relevant documents to testify to the learning were integrated into a digital portfolio produced in the Google Drive interface, from the

Table 2 Organization of learning and evaluation situations (LES) portfolio use

	Stage 1	Stage 2	Stage 3
Before the LES Project of communication	Explanatory statement in pairs	Discussion	Summary of strengths and challenges
Initial production	Video capsule Registered first at home Explanation of task Self-assessment without and with video	Class discussion (videorecording) Self-assessment without and with video	Tale interpretation project like a storyteller and discussion capsule recorded at home Self-assessment with video
State of students' knowledge	Production and determination of learning goals in a large group	Production and determination of learning goals in a large group	Feedback on production and goal setting large group learning
Training workshops (Oral objects taught)	Specialized lexicon (meaning and pronunciation) Visual support	An organization of feedback by discussion	The characteristics of challenges Voice changes in the tale Preparing for the discussion
Final production	Exhibited in pairs in front of the class (recording video) Self-assessment without and with video Rating by the teacher of the class group	Class discussion (recording video) Self-assessment without and with video Rating by the teacher of class-group	Production 1: pairs (videorecording) Production 2: Class discussion (videorecording) Self-assessment without and with video Teacher's assessment of class-group (discussion only)

suite Google Apps for Education. Thus, from one learning situation to another, students could consult the elements deposited in the portfolio to remember the strengths, challenges, and goals from one oral test to the next.

Instruments

To describe and analyze the contribution of the digital learning portfolio in our context, the students answered two multiple-choice questionnaires, the first having been administered before the start of LES and the second after the digital learning portfolio experiment. These were built into the Google Form interface and consisted of closed questions (48 statements in the first questionnaire and 52 statements in the second questionnaire). Each questionnaire includes statements relating, among other things, to self-regulation processes (22 in the first questionnaire, 28 in the second), adapted from the three phases of Zimmerman (2000).

The second questionnaire collected data related to the use of the digital portfolio. Each of these statements had to be answered by indicating the frequency with which each of the elements occurred, according to the following choice of answers: Always, most of the time, Rarely, never, I do not know.

The reflections written in their self-assessment and reflection sheets, and the comments collected during individual semi-directed interviews, were obtained to complete the data necessary to achieve the research goal. Sixteen students were selected whose complete portfolios agreed to participate in the interview. The level of speaking skills of these students corresponded to the expectations of their school level or exceeded them. No student with a skill level below expectations of the school level has adequately completed the self-assessments of the three stages stated in Table 2.

For validity purposes, the adopted questionnaires were moderated by jury members consisting of five EFL university professors from Jordanian universities. Their feedback and suggestions were considered, and the instruments were modified accordingly. The jury suggested that timing needed to be considered for each task to see how much it could elicit from the participants. One of the suggestions was to bring a familiar topic for task two, so more language could be generated to assess their speaking skills. Further, the construct validity was evaluated using correlation analysis and internal consistency. As such, the questionnaires were piloted on a sample of 25 learners from outside the study sample. The Pearson correlation coefficients between the sub-phases score and the total score of the questionnaires were extracted. The Pearson correlation coefficient values were statistically significant at.89 and.91 for both questionnaires (P 0.05). Regarding the reliability of the questionnaires, the scores of the used Cronbach Alpha test were statistically significant as.83 and.89 (P 0.05).

In the present study, the strategies the participants use to regulate their learning are in focus; consequently, the semi-structured interview was the second tool to obtain an awareness of the students' ways of using the strategy under question. A list of questions was developed on the basis of the literature on cognitive and self-regulation strategy use. Then, a jury was consulted, which gave helpful guidance as to how to modify specific questions to improve efficiency. Each interview lasted for 15–20 min. Interviews were carried out in the library of the school under the study and enclosed the subsequent

key issues: perceived speaking tasks, ways of learning and preparing speaking tasks, and sources that help in learning speaking.

Data analysis

Using Microsoft Excel, a descriptive statistical analysis by creating frequency distributions was performed to analyze the responses to the two questionnaires. The results, presented in the form of frequency tables, allowed us to obtain an overall portrait of the use of self-regulation processes by the students in our sample (Johnson & Christensen, 2000). Then NVivo software was used (version 12.5.0) to perform a content analysis of the reflections from the self-assessment and reflection sheets and the comments from the interviews, according to the approach Baxter (2009) proposed. Through this process, these elements were coded following a coding grid created from self-regulatory processes (Zimmerman, 2000). This has been modified and improved during the analysis that meets the research objectives, which is to describe and analyze the contribution of the digital learning portfolio in the use of self-regulation strategies of high school students in the Kuwaiti class, the language of instruction. We present and discuss the most relevant results according to the three phases of Zimmerman's model of self-regulated learning (Zimmerman, 2000). For interviews, the coding of data analysis originated with the classification of data in pursuit of arrangements, themes, and implications that appeared from the data. To this end, the researchers identified the patterns into which self-regulated learning is assembled. The aim is to create descriptive patterns. An independent observer helped in assessing the interviews. The degree of agreement among the raters was 0.89.

Results and discussion

The portfolio and anticipation phase

The first category of the anticipation phase for task analysis includes, remember, two essential processes for the student: self-setting of goals and strategic planning. Table 3 presents the percentage of responses expressed by the students to the statements concerning these processes in both research questionnaires.

Analysis of these responses shows us from the outset that students rightly place a great deal of importance on the instructions and requirements presented by the teacher, leading subsequently to the setting of learning goals by students, an important step in the task analysis process (Zimmerman, 2000). Whether before or after the completion of the three LES, a vast majority of students say they read the instructional documents received and ask questions of the teacher or classmates when there is a need for clarification. However, more advanced strategies such as rephrasing instructions in their own words, asking classmates to reread this rephrasing, or formulating specific objectives guiding preparation are carried out *either all the time* or *most of the time* in a much smaller proportion.

Moreover, when the goals formulated by the students are analyzed and compared to the conditions presented by Zimmerman (2000), certain elements attract attention. First, all students whose self-assessment sheets were included in the portfolio and the statements made in the interview were analyzed and formulated proximal goals, which could be achieved during the current LES or the subsequent LES. In addition, for the

Table 3 Percentage of responses to questions about self-regulation strategies during the anticipation phase (The totals for some statements do not reach 100% due to the answer I do not know)

Statements (Q1 and Q2)	Always or most of the time		Rarely or never	
	Q1	Q2	Q1	Q2
I take the time to read all the instructions for speaking well before preparing for it	0.90	0.93	0.10	0.07
I ask my teacher questions to clarify the instructions that are not clear to me	0.79	0.86	0.21	0.14
I ask my classmates questions to clarify instructions that are not clear to me	0.85	0.94	0.15	0.06
I reformulate the instructions related to speaking in my own words before preparing it	0.49	0.52	0.51	0.48
I ask classmates to read my rephrasing to make sure I understand the instructions correctly	–	0.26	–	0.74
I set myself specific objectives to guide my speaking preparation (Q2: and I write them down in my digital portfolio)	0.67	0.51	0.33	0.49
I determine the means that I will put in place and that will allow me to achieve these objectives (Q2: and I note them in my digital portfolio)	0.49	0.46	0.51	0.54
I determine what will be easy and difficult for me in preparing for my speaking test (Q2: and I note it in my digital portfolio)	0.73	0.39	0.27	0.61
It is easy for me to determine what will be easy or difficult to prepare for my oral presentations	–	0.73	–	0.27
I list the means I will put in place to overcome the difficulties I see (Q2: and I write them down in my digital portfolio)	0.29	0.22	0.71	0.78

most part, the goals are personal to the student (n = 11), sometimes explicitly associated with the teacher's requirements as presented in the evaluation grids or the departure instructions (n = 5). In any case, for all participants (n = 16), these are specific goals in the sense that they relate to the mastery of explicitly named oral objects, but the formulation of these goals is still somewhat vague in most cases, making it difficult to assess their level of difficulty. EA 02/F02: *Being more natural and better prepared. I had identified progression and consistency as elements to work with.*

It is also interesting to note that the setting of these goals is carried out for the majority of students without consulting self-evaluations carried out in the previous LES, given that they say they remember the concepts to be worked on or because they have the impression that the same objectives come up from time to time. However, Zimmerman (2000) stresses the importance of formulating these goals to lead students to achieve better learning and improve their metacognitive skills.

Students need to succeed in demonstrating a high level of mastery of self-regulation strategies, and the portfolio does not, therefore, seem to have been a helpful tool, even if the organization of the SS, according to Schneuwly and Bain's (1994), provided for the clarification of the learning goals and objectives specific to each communication project. They established that it is essential to pinpoint applicable reference theories of speech production, language processes, and text type, which can inform the assessment.

We do know, however, that this stage is difficult for high school students (Winne & Hadwin, 2013) and that supervision by the teacher, among other things, through feedback, supports the students in deepening their cognitive and metacognitive skills (Barbera, 2009; Barker, 2003). Therefore, we can hypothesize that this mode of feedback and coaching limits the ability of students to fine-tune the transfer of specific LES goals to specific student goals. The students could have further honed their ability to do this.

Regarding strategic planning, less than half of the students responded that they took the time to determine the means to be put in place to achieve their goals in both the first and second questionnaires. Let us add to this that when asked in the second if they draw up and note in their portfolios the list of the means to be put in place to overcome the difficulties they foresee, the proportion of students who always answer or *most of the time* is more than 23.4%. These results are reflected in the self-assessments and during the interviews, in the difficulty of explaining the strategies used during speaking tasks in a clear and detailed manner. When they have to indicate, in the self-assessment sheets, what they intend to do again in the same way and what they wish to do differently for future oral production, several students respond only by stating the goals they wish to achieve the next time, or by mixing the goals with strategies to implement. The following two examples illustrate this well. EA01/F06*: I intend to stay as natural as possible because, otherwise, it makes the conversation strange. I will try to impose myself a little more on the discussion*. EB23/F02: I *will work on my vocabulary. I will try to be more enthusiastic*.

We observe a change in student responses. We can see this trend in Fig. 1, which shows the percentages of the different types of responses recorded. The first and second LES include self-assessments in the same oral genre: oral presentation for the first LES, discussion for the second. The percentage associated with responses comprised strategies significantly developed between the first and the second self-assessment (from 31 to 63% for LES1, and from 19 to 56% for LES2). This is not the case in the third LES (50% for the two self-assessments), whose two self-assessments each relate to a different oral genre: the oral presentation for the first self-assessment, and the discussion for the second, which can probably explain this difference.

In addition, these results show that the experience and learning gained during an LES allow students to better understand the effect of the strategies used on their speaking skills. Moreover, although the approach associated with the sequence and the didactic model presented in our theoretical framework and guided LES development have certainly contributed to this awareness (Schneuwly and Bain (1994), The use of form self-assessment and synthesis, which together with the video recordings constitute the central features of the portfolio produced by the students, offers them a break, allowing them to question and objectify the learning process and the preferred strategies, the advantage of which is elsewhere identified by Gibson and Barrett (2003).

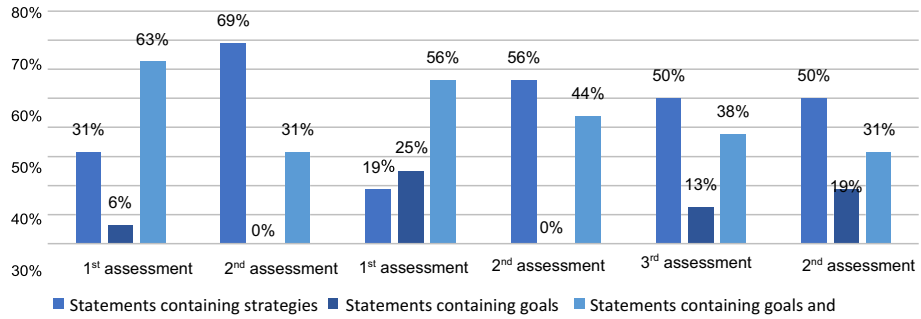

Fig. 1 Percentage associated with types of statements in strategic planning

From a motivational belief perspective, this element is associated mainly with the issue of affective commitment. The question of low intrinsic interest is worrying, insofar as few pupils express their enthusiasm for the idea of preparing an oral production. In a research questionnaire, we asked them to what extent they were "happy" when they had to prepare for an oral test, to which 69% answered "rarely or never") and that this aspect is important to promote the use of effective self-regulation strategies (Zimmerman, 2000). As for self-efficacy beliefs, the vast majority of the 16 students whose self-assessment and reflection sheets, as well as the interviews, were analyzed affirmed that they fully or moderately believed, depending on the oral genre being worked on, in their ability to produce good speaking skills (n = 15). Finally, all of these students (n = 16) set mastery goals, even if they did so briefly. Following Zimmerman (2000), these two parameters of motivational beliefs are indicators of self-regulation.

The portfolio and realization phase

The answers related to the realization phase and expressed in the two questionnaires (Table 4) offer us a first portrait of the general strategies implemented by the students during the preparation and realization of speaking skills. In general, rereading instructions and using feedback from the teacher and classmates to improve work are strategies used *always* or *most of the time* by a large majority of students. On the other hand, and not surprisingly, given the results obtained in the preparation phase, a list of objectives to check progress can be used. For *always* or *most of the time* in the portfolio, modifications made to the strategies mobilized were carried out by only 22.1% of the participants.

Content analysis of written material also allows us to obtain information interesting about strategies that allow students to maintain control over their learning process. Table 5 shows the number and percentage of students who mobilized some of the self-control strategies proposed in the Zimmerman model (Zimmerman, 2000).

The results show that the three most used strategies are the strategies focused on the task, those relating to time management, and those relating to seeking help. When we analyze the task-centered strategies that the students mobilized, we find 62 different strategies emerge from the review. Of these, 48 are strategies that we described as

Table 4 Percentage of responses to questions about self-regulatory strategies during the realization phase

Questionnaire statements (Q1 and Q2)	Always or most of the times		Rarely or never	
	Q1	Q2	Q1	Q2
I regularly check my list of goals to see if I'm progressing well	0.55	0.58	0.45	0.42
I often reread the instructions to make sure that my preparation allows me to respect them	0.92	0.95	0.08	0.05
When a strategy or means that I have in place doesn't work, I realize it	0.87	0.80	0.13	0.20
I change the way I do it when I realize that something is wrong	0.93	0.90	0.07	0.10
I note in my portfolio the changes I make to my way of doing things as they happen	–	0.29	–	0.71
I ask my teacher for help when I need it	0.82	0.79	0.18	0.21
I use my teacher's feedback to improve my work	0.95	0.96	0.05	0.04
I use feedback from my classroom	0.84	0.87	0.16	0.13

Table 5 Percentage associated with types of statements in strategic planning

Strategies	N	%
Self-instruction	5	31.30
Imaging	2	12.50
Task-centered strategies	16	100.00
Time management	11	68.80
Environmental organization	4	25.00
Finding help	11	58.8
Improved interest	1	6.25

Table 6 The average number of strategies verbalized per student

The average number of strategies per student	N
Average of the total number of verbal strategies (self-assessments + summary sheet + interview)	**15**
Total average of general strategies	11
Total average of specific strategies	3.4
Total average of verbalized strategies (self-assessment sheets + the reflection summary sheet only)	**11**
Total average of general strategies	7.9
Total average of specific strategies	3.4
Total average of verbalized strategies (interviews only)	**3.9**
Total average of general strategies	0
Total average of specific strategies	3.9

general, applicable to a wide variety of communication projects. The three most used general strategies are the preparation of his oral production content in the form of a point plan, the use of documents provided by the teacher, and the fact of not learning a text by heart. The other strategies, 14 in number, are said to be specific. That is, they apply to a particular communication project. We find, for example, taking notes on a novel in preparation for the discussion or responding to preliminary questions on the assessment criteria, which are the two most used in the second LES.

The use of the learning portfolio appears to have offered an important advantage regarding the verbalization of these strategies by the pupils. Indeed, the content analysis of the files self-assessment and reflection and the comments made during the interviews allow us to note that each student uses a variety of strategies, in addition to being able to refer to strategies used in his self-assessment sheet during the implementation phase. Indeed, Table 6 points out that students used an average of 15 different strategies in the three LES, and the majority of strategies used by the students (11) were recorded in the self-assessment sheets produced after each speaking task as well as in the reflection summary sheet completed after the second LES, rather than during interviews, where there are only 3.9 verbal strategies on average. This observation shows us that the self-assessment and reflection sheets included in the portfolio constitute an essential tool to verbalize strategies.

EB23 / F08: I think that I will no longer learn the text by rote like in my oral before because I learned that I do better if I do not learn the text. Let us also add that this

verbalization allows the pupil to develop a critical sense of his approach (Tillema, 2002). We have seen the manifestation of critical thinking through the students' reflections, particularly regarding whether or not to learn a text by heart for speaking skills. Several students mentioned in the self-assessment and reflection sheets included in the portfolio, throughout the completion of the three LES, that this strategy had proved ineffective. This is therefore an example of the interesting contribution of this tool to the development of students' critical thinking.

The analysis of the processes of metacognitive monitoring and Self-recording is at the heart of self-observation during the realization phase. It sheds interesting light on the students as they had proved an ability to analyze their learning. Therefore, the portfolio of exciting the use of this self-regulated strategy analysis first shows that metacognitive monitoring is a difficult task for many students since, out of the 16 participants whose written material and interviews were analyzed, nine indicated difficulties in observing the evolution of their learning (n = 9), while that 4 indicates ease of doing it (n = 4). However, the passages relating to the recording of s are significant in the participants (n = 16) and include different types of content presented in Table 7. We can see that most students can identify difficulties and strategies, effective or not, at the end of cognitive work analyzing the learning process.

There seems to be a discrepancy between what the pupils express in the questionnaire (Table 4) and what emerges from the content analysis of the material and interviews. Indeed, in the second research questionnaire, only 22.1% of the participants indicated doing so *always or most of the time*. Therefore, the students do not seem to have made the connection between the questions asked in the research questionnaire and this cognitive operation associated with the portfolio that they all manifested in the self-assessment and reflection sheets that they included.

This ability to build a repertoire is a crucial element of self-regulation since it allows students to have a background that will lead them to plan their future learning efforts better and apply them to professional life. Therefore, the use of the portfolio contributes to the construction by the pupils of their repertoire of traces of learning, as encouraged by Zimmerman et al. (2000). However, the discrepancy between the results obtained from the questionnaire and the observations resulting from the analysis of content recalls the importance of supporting students during the reflection process, as pointed out (Shepherd & Hannafin, 2011), but also the training to be

Table 7 Proportion of the types of the content expressed by the pupils in the passages relating to self-recording

Type of content expressed	N	%
Difficulties related to the communication task or project	15	93.75
Strategies that work	15	93.75
Strategies that do not work	12	75.00
Strategies to be implemented in the future	9	56.25
Better self-knowledge	10	62.50
Learning-related to the oral gender worked	9	56.25

put in place to allow the development of their full metacognitive awareness, as Zimmerman emphasizes (Zimmerman, 2000).

The portfolio and reflection phase

The third phase of self-regulation leads students to first make a personal judgment on the results of their learning by first evaluating their performance. Recall that for (Shepherd & Hannafin, 2011), self-assessment is at the heart of the process of creating a learning portfolio and that the students who participated in our research had the opportunity to carry out two of them after each oral production: one first without listening to the recording of it, a second after listening.

The results that we presented there show that the approach proposed by the learning portfolio, particularly the reflection on the processes and learning carried out at different times of the LES using video recordings, leads students to determine better their strengths and their challenges in speaking, even if it is still difficult for some students to determine their level of competence accurately. On the other hand, despite difficulties in organizing documents in the portfolio, most students see the relevance of carrying out self-assessments of their oral productions. The use of video recordings allows the pupils a correct awareness, and the fact that these recordings make it possible to keep in the portfolio traces of the productions carried out offers the pupil the possibility of better observing its evolution over time.

The research results presented here suggest that the portfolio allowed students to verbalize the causes of their successes and failures. The analysis of these causal attributions makes it possible to raise the fact that 67% of them are internal, that is to say, associated with implementing strategies that have worked or not. This observation is interesting because the more the student refers to internal causes, the more his efforts are likely to be sustained over time (Zimmerman et al., 2000). This seems to be the case for almost two-thirds of our sample, and this awareness can only be beneficial for developing their capacity for self-regulation. Finally, regarding personal reactions, coded segments referring to self-satisfaction are found in all students, whether these reactions are positive or negative.

Additionally, the students all expressed adaptive decisions in their self-assessment and reflection sheets, showing that they want to make changes to strategies to become more effective in the future, as detailed by Zimmerman et al. (2000). As for defensive decisions, they can only be seen in four participants and do not represent the majority of their decisions. Therefore, the use of the learning portfolio as a tool promoting reflection and metacognition makes it possible to highlight and guide the self-regulatory processes associated with the reflection phase, thanks to the approach proposed in the sheets of self-assessment and reflection.

Despite these benefits associated with using the digital learning portfolio, the students found it challenging to take full advantage of the organizational aspect of the tool, namely, the fact that it serves as a container for trace learning. In the second research questionnaire, some responses (Table 8) show that nearly half of the participants find it difficult to perceive the usefulness and relevance of the tool in their thinking tasks.

The comments collected during the interviews prosper in the same direction since when the participants were asked to tell us about their perception of the organizational

Table 8 Percentage of responses expressed regarding the usefulness of the portfolio

Questionnaire 2 statements	Always or most of the times	Rarely or never	Always or most of the times
The activities related to the digital portfolio in oral communication allow me to reflect on how I have put in place to determine which ones work and which do not	48.4	27.7	23.9
Activities related to the digital portfolio in oral communication facilitate my work of reflection	49.2	36.1	14.7

aspect of the portfolio to group the material having allowed reflection on oral production, 14 of the 16 participants indicated that they had not entirely found a use for the portfolio itself. EA01 / ENT: *I do not know if it was really useful because I did not really visit the files and review the criteria and videos. I did not really pay attention to the portfolio. I just fill it in, then after that, ok, it has over.* EB26 / ENT: […] *the digital portfolio, I was not going to see it much, so I didn't really see what it was for. However, I have the impression that if I had gone to see him, it would have helped me more because I could have made a summary of the oral situation before the one I was going to do, it could have helped me, but I did not really do it.* It is clear that some students felt that the e-portfolio was a useless exercise. The reason behind such feelings that did not pay attention to the files and watched the videos.

Conclusion

The objective we aimed at in this article was to describe and analyze the contribution of the digital learning portfolio to the use of self-regulation strategies by students in secondary stage speaking activities. Most of the findings of the present study are consistent with the findings from previous research, including those by Abrami et al., (2013), Mills-Courts and Amiran (1991), Brown (2007), Dumais, and Messier (2016), and Messier (2017) on videotaped lectures, and a study by Watson et al. (2016).

The quantitative and qualitative analysis that we carried out allowed us to better understand this contribution regarding the different phases of Zimmerman's model (Zimmerman, 2000). Initially, *goal setting* is partially completed by students who have no reflection on self-assessments to determine such goals. The use of the portfolio does not appear to have adequately supported the students in this process, which we attribute to the hypothesis of the lack of supervision by the teachers. *Strategic planning*, for its part, seems to benefit from the tools of the portfolio, given that between two productions, the self-assessment sheets give students the time to stop Quiz Statements2 *I do not know if it is always or most of the time, rarely or never*.

At the end of *metacognitive monitoring* and *self-regulation*, learners are enabled to rely on the various documents related to LES, to record their successful or unsuccessful learning experiences, to comment on them, and to determine the strategies that are most effective and which need to be modified to guide the planning of future learning efforts. The reflective approach associated with the portfolio finally offers an idle time, allowing a self-assessment of performance and the establishment of causal attributions and the adaptive and defensive decisions that will result from it.

However, the organizational aspect of the portfolio does not seem to contribute to developing students' self-regulation strategies in oral tasks, as demonstrated by the analysis of the responses to the second research questionnaire and the semi-interviews. Thus, the use of reflective tools associated with the digital learning portfolio appears relevant to supporting the development of self-regulation strategies in oral production. However, like the recommendations resulting from the research, it is essential to ensure close follow-up with the students and offer training to guide them towards optimal use of the tool, particularly regarding self-setting goals, which is a challenge for students. To increase the efficiency of the students in the use of the portfolio and self-assessment sheets, modeling would have every advantage of being carried out, either by explaining the process of reflection to the students or by proposing a portfolio model already built so that the pupils have benchmarks on which to rely.

Research can be evaluated more accurately if the limitations of the study and the strength of the research are acknowledged. In terms of limitations, highlighting the sample, it only consists of girls attending a private school. Furthermore, students with a level of oral product were not included in the sample.Therefore, the obtained results apply to a particular context, making them difficult to transfer.

However, the exploratory nature of the present research justifies the choice of the sample and is also a strength; the current study entailed the consideration of the cognitive process underlying the learning portfolio and which characterizes the oral work of high school students. It involved a more precise understanding of the role of the tools offered by the oral production learning portfolio at different times of task performance. It is, therefore, a contribution to the field of oral didactics.

EFL language learners at diverse levels regulate their own oral speaking tasks by the means of e-portfolios. The capacity to perform speaking tasks might be different at each level. This finding is in the same vein as Pintrich's (2000) assertion of the effect of likely moderating factors. E-portfolios are the moderating factors for self-regulation. Though the present study was worthwhile on the way to understanding extra info on how learning is regulated as this has been a deserted investigation area in Kuwait. Moreover, self-regulation strategies by the means of e-portfolio enable students to be active participants in a lively process (Winne & Hadwin, 2013). This study focused on secondary stage students' speaking tasks, which are based on e-portfolios to guide their performance.

It would be interesting to analyze the strategies further to better understand how pupils mobilize according to the language genre, which would undoubtedly make it possible to better understand their frequent interactions and patterns. It is also important to research ways to facilitate feedback from teachers in a context where the burden of the task is considered a barrier to adequate support for students.

Abbreviations

EFL: English as a foreign language; LES: Learning and evaluation situations portfolio.

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Author contributions

Dr. Al-Hawamleh participated in the study's design and performed the statistical analysis. Dr. Alazemi carried out the treatment and participated in the sequence alignment. Dr. Al-Jamal participated in the sequence alignment, drafted the manuscript, and helped to draft the manuscript. All authors read and approved the final manuscript.

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Declarations

Ethics approval and consent to participate
We, the authors, declare that this paper is an original report of our research that has been written by us and has not been submitted for any journal. The experimental work is almost entirely our work; the collaborative contributions have been indicated clearly and acknowledged.

Competing interests
The authors declare no conflict of interest.

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